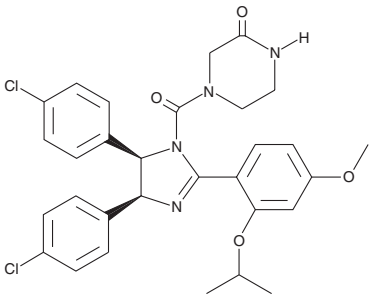
PRODUCT INFORMATION

(–)-Nutlin-3

Item No. 18585

CAS Registry No.: 675576-98-4
Formal Name: 4-[[(4S,5R)-4,5-*bis*(4-chlorophenyl)-4,5-dihydro-2-[4-methoxy-2-(1-methylethoxy)phenyl]-1H-imidazol-1-yl]carbonyl]-2-piperazinone
Synonym: Nutlin 3a
MF: $C_{30}H_{30}Cl_2N_4O_4$
FW: 581.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(–)-Nutlin-3 is supplied as a crystalline solid. A stock solution may be made by dissolving the (–)-nutlin-3 in the solvent of choice, which should be purged with an inert gas. (–)-Nutlin-3 is soluble in the organic solvent dimethyl formamide (DMF) at a concentration of approximately 50 mg/ml.

(–)-Nutlin-3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (–)-nutlin-3 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (–)-Nutlin-3 has a solubility of approximately 0.1 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(–)-Nutlin-3 is an inhibitor of the protein-protein interaction between p53 and Mdm2 (IC_{50} = 0.09 µM).[1] It increases p53 levels, induces apoptosis, and reduces cell viability in HCT116, SJSA-1, and RKO cells that express wild-type p53 but not MDA-MB-435 or SW480 cells expressing mutant p53. (–)-Nutlin-3 (200 mg/kg) reduces tumor volume in SJSA-1, MHM, LNCaP, and 22Rv1 mouse xenograft models.[2]

References

1. Vassilev, L.T., Vu, B.T., Graves, B., *et al.* In vivo activation of the p53 pathway by small-molecule antagonists of Mdm2. *Science* **303(5659)**, 844-848 (2004).
4. Tovar, C., Rosinski, J., Filipovic, Z., *et al.* Small-molecule Mdm2 antagonists reveal aberrant p53 signaling in cancer: Implications for therapy. *Proc. Natl. Acad. Sci. USA* **103(6)**, 1888-1893 (2006).

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